



Aeronautic Industry Skills Resolution for a more
Efficient VET Offer

Final Report

Public Part

Project information

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Executive Summary

The AIRVET project: “Aeronautic Industry Skills Resolution for a more Efficient VET Offer” is carried out by the AIRVET Alliance, which brings together bodies with Aeronautics specific expertise, Vocational Education Training (VET) providers and bodies involved in education and training systems from six European Countries: Portugal, France, Italy, Poland, Spain and the UK. They share the goal of improving the adequacy and attractiveness of VET training offer addressed to this sector.

AIRVET’s main aim is to design, develop, evaluate and disseminate adapted/new curricula and VET courses for the aeronautics sector, to help overcome gaps of qualified personnel in the aeronautics industry. The target users of the project’s results are, therefore: workers and future workers of the aeronautics industry (AI), bodies involved in education and training systems, schools and students (potential AI workers), VET providers and trainers, as well companies (SMEs and large companies) connected to the aeronautics industry.

The main outcomes expected from AIRVET are associated to its different phases:

- The **Analysis of skills needs** has provided a *Territorial Analysis*, which is a collection of training needs involving the stakeholders of the sector. This analysis included an online survey in 6 countries with questionnaires for 4 target groups, interviews, focus groups and desk research. Its conclusions, compiled in the report *Territory Analysis*, provide a wide set of information on the current training offer and skills gaps identified in terms of VET offer at European level for the aeronautics industry.
- The **Curricula Design** phase provided 4 *Training Curricula/Programmes* under the theme of Human Factors with specific targeted to meet the needs of the areas identified.
- The **Curricula Delivery** phase resulted in 9 *e-Learning Lessons* which can be used as “self-standing” training materials and as support materials to cover specific themes of the four Human Factors curricula defined. The lessons are organised in 3 learning objects targeted at different audiences: Students/future workers, maintenance technicians and airport operation workers.

Both the curricula and the e-Learning lessons are available in 6 languages (English, Portuguese, Spanish, Italian, Polish and French) and available free of charge in the project website www.airvet-project.eu.

All materials have been developed in close contact with our target groups and included multiple evaluation and validation stages. Therefore, the AIRVET project launched the seeds, from an early stage, to promote its future sustainability. At this stage, we have agreements with several organisations from various countries for the use of the training materials after the project closure.

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1. Project Objectives

AIRVET's main aim is to **design, develop, evaluate and disseminate adapted/new AI curricula and VET courses in the specific fields of Maintenance and Information and Communications Technologies (ICT)** to help overcome gaps of qualified personnel in the aeronautics industry.

AIRVET's activities address a set of strategic objectives:

- To foster a close, open, informal dialogue and sustained interactions and networking between: VET providers, aeronautic experts and bodies involved in education and training systems;
- To define and sustain a Joint Programme and Priorities to set the base of a strong engagement and sustainable partnership;
- To improve the knowledge and gather solid evidence from labour market intelligence to identify skills needs within the AI;
- To raise awareness of young people about future career paths in aeronautics, foster science education and provide contact with different real work situations in the aeronautic sector;
- To review, create and improve the VET curricula and training programmes to the aeronautics industry, to address actual and future labour market needs;
- To provide innovative ways of delivering VET, with a special focus in the development of multimedia to increase skills and experience with interactive training systems;
- To promote the future sustainability and enlargement of the AIRVET sectoral alliance, aiming at reaching a real and spontaneous attachment between the members and attract and engage new members after the end of the project.

The activities and results of the project are targeted at five **main target groups** at European level:

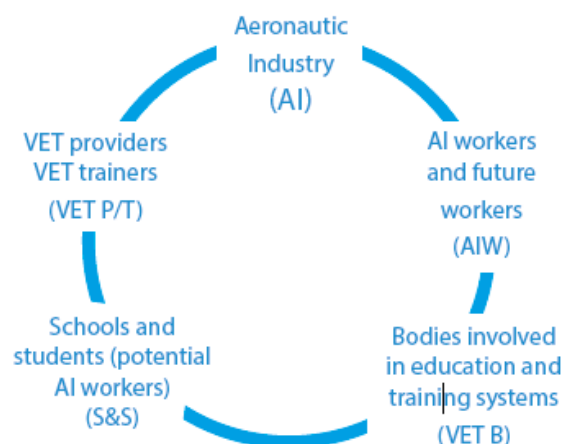


Figure 1: AIRVET Target groups

AIRVET worked **TO** and **WITH** these target groups through different activities and events:

Table 1: AIRVET's main products and events and respective target groups

PRODUCTS/ EVENTS	TARGET GROUPS
<ul style="list-style-type: none"> - Flight Plan (Booklet to present the project); - Launch Events; - Website & Other dissemination materials; - AIRVET Database of Stakeholders; National Workshops; Final Conference 	- <i>All</i>
<ul style="list-style-type: none"> - Focus Groups to identify/validate skills needs 	- <i>VET providers and VET trainers</i>
<ul style="list-style-type: none"> - Open Days for Future workers in AI 	<ul style="list-style-type: none"> - <i>Schools and students,</i> - <i>AI workers and future workers</i>
<ul style="list-style-type: none"> - Territory Analysis (report) ; - AI Maintenance and ICT training Curricula; - Sustainability Plan for VET Curricula; - New Routes Report 	<ul style="list-style-type: none"> - <i>Aeronautic Industry,</i> - <i>AI workers and future workers;</i> - <i>VET providers and trainers;</i> - <i>Bodies involved in education and training systems</i>
<ul style="list-style-type: none"> - Multimedia Resources for Training + User's Guide Manual; - Pilot Runs to test and validate the multimedia materials 	<ul style="list-style-type: none"> - <i>Aeronautic Industry,</i> - <i>AI workers and future workers;</i> - <i>VET providers and trainers,</i> - <i>Schools and students</i>

Considering these multiple interactions and the actions taken to ensure the future exploitation and sustainability of results, AIRVET has achieved agreements with a number of individuals and institutions, who have stated that the project's results (especially the training curricula and the e-Learning lessons), address some of the skills gaps they need to overcome. Therefore, the project has already produced an important impact, but it is expected to cause an even stronger and wider impact from now, since all materials are ready and available online for free in different languages.

2. Project Approach

The AIRVET approach comprised 4 main phases, as illustrated in the diagram.

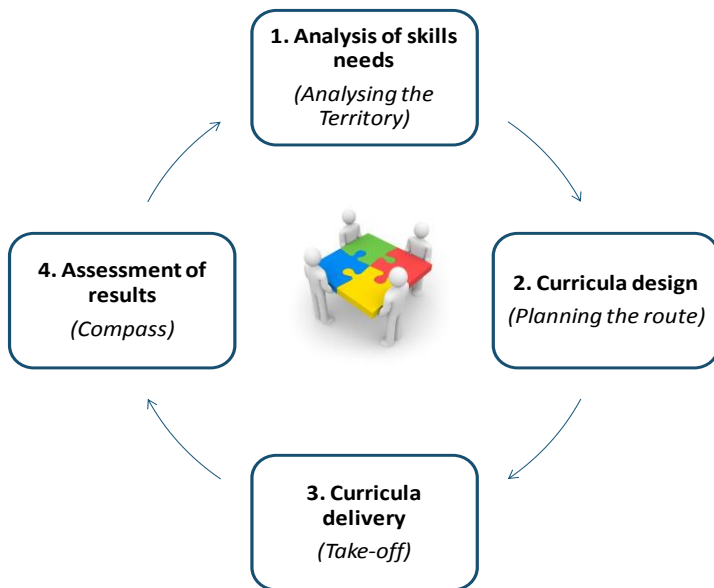


Figure 2: AIRVET main phases

The AIRVET alliance started by “**Analysing the Territory**” (phase 1), with a thorough research, survey and organisation of focus groups covering the EU but with main focus in France, Italy, Poland, Portugal, Spain and the UK. This phase provided information and input from relevant stakeholders regarding the training needs in the fields of maintenance and ICT. Its main conclusions are compiled in the document *Territory Analysis* (available on the project website).

The analysis of skills needs (concluded in the first year of the project) provided basis to “**Plan the Route**” (phase 2), where partners addressed the skills/training gaps identified within the previous phase. This was achieved through the creation of new curricula and through the adjustment/enrichment of already existing curricula. Based on the conclusions obtained, the consortium decided to focus on the theme “**Human Factors**”. Therefore, four human factors based training course proposals were outlined for different target groups: Maintenance technicians; Airport operation workers (two courses with different lengths and for specific users); Potential future aeronautical workers.

Phase 3, **Curricula delivery**, consisted in the development of multimedia materials (e-Learning lessons) also addressing the theme of Human Factors for the above-mentioned target groups. The lessons and curricula produced have the potential to both improve the current VET training offer (i.e. offer more courses and contents for potential workers) and also fill training gaps for workers within the EU aeronautical industry.

Phase 4, **Assessment of Results**, was crosscutting and included several events and methods to **test, evaluate, provide input and validate** the main results and ensure continuous monitoring of the project progress. Another crosscutting activity of the project was dissemination and exploitation. So, in order to assess the project’s results and disseminate the outcomes, AIRVET reached its targets both through online tools and events, including:

- **Launch events** in the 6 partner countries to raise awareness about the project.

- **Focus groups** (Spain, France, Poland, Italy) to discuss the analysis of skills needs.
- **Open Days** for Future workers in AI to raise awareness of young people about future career paths in aeronautics, including work opportunities.
- **Pilot Runs** (Spain, France, Poland, Italy) to test/validate the multimedia resources.
- **AIRVET National Workshops** (in the 6 partner countries) to validate the final results and promote them among relevant stakeholders in each country.
- **AIRVET Final Conference**, which took place in Toulouse, in September 2015 to promote the final results of the project.

AIRVET's activities were carried out by the consortium (the AIRVET Alliance, composed of 10 partners from 6 countries), but counted with the collaboration of different stakeholders at different stages.

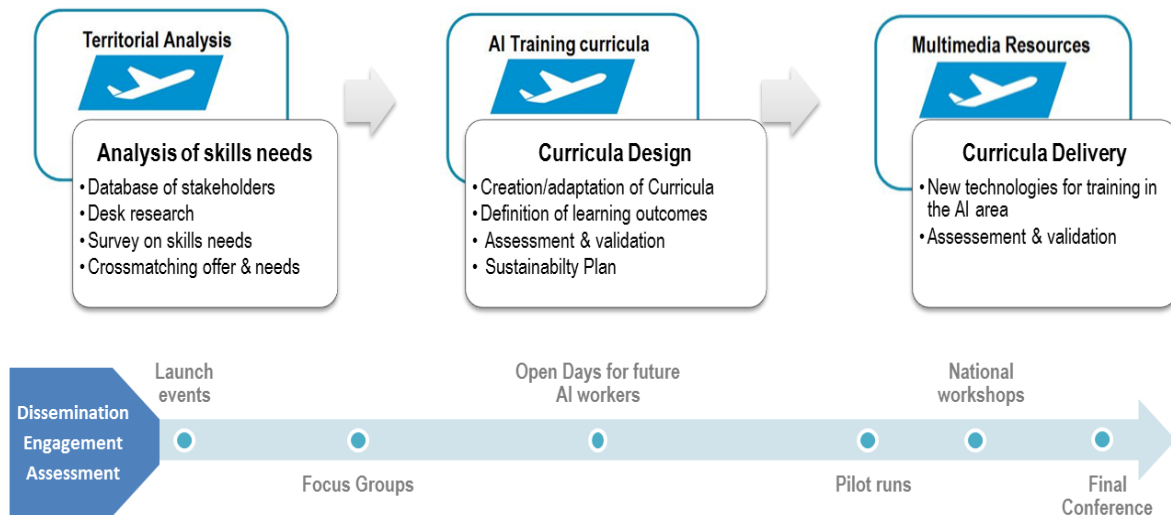


Figure 3: AIRVET progress of activities and events

This involvement of external stakeholders in key activities of the project is also part of the AIRVET approach to build an Alliance of relevant AI actors with regular communication and collaboration. Since the assessment activities proposed in the AIRVET approach were intense and frequent, many of these activities had a direct impact in the dissemination potential of the project. Participants mobilized during the testing and validation phases felt that they input to the needs assessment and development of the training materials was incorporated and therefore they are keen to use the results produced by AIRVET, which is crucial for the project's future sustainability. This future sustainability is based not only in the use of the project's materials, but also in the multiplication of collaboration possibilities among different organisations, which was also clearly reinforced during the project.

3. Project Outcomes & Results

Besides the global expected outcomes connected to strengthening collaboration and dialogue between aeronautics stakeholders at European Level, the main specific outcomes expected from the AIRVET project are associated to its different phases:

- The **Analysis of skills needs** has provided a *Territorial Analysis*, which is a collection of training needs involving the stakeholders of the sector.
- The **Curricula Design** phase provided 4 *Training Curricula/Programmes* under the theme of Human Factors with specific targeted to meet the needs of the areas identified.
- The **Curricula Delivery** phase resulted in 9 *e-Learning Lessons* which can be used as “self-standing” training materials and as support materials to cover specific themes of the four Human Factors curricula defined. The lessons are organised in 3 learning objects targeted at different audiences: Students/future workers, maintenance technicians and airport operation workers.

ANALYSIS OF SKILLS NEEDS - TERRITORIAL ANALYSIS

This analysis included an online survey in 6 countries with questionnaires for 4 target groups, interviews, focus groups and desk research. Its conclusions, compiled in the report *Territory Analysis* (available for download from www.airvet-project.eu) provide a wide set of information on the current training offer and skills gaps identified in terms of VET offer at European level for the aeronautics industry. Three main subject areas were identified where new materials could be developed to help address skills and training gaps: **maintenance, ground operations, human factors**.

The results of the analysis also revealed a strong need to ensure that young people and potential future employees are made aware of career possibilities. We believe that human factors can also be used as a theme to address this need.

In conclusion, we realised that the **human factors** subject fits the skills/training gaps identified within the maintenance and ground operation functions of the airline industry, but it was also frequently independently identified as a subject area with skills gaps.

CURRICULA DESIGN – CURRICULA ADDRESSING “HUMAN FACTORS”

Considering the conclusions of the needs analysis, the AIRVET Alliance used the theme of human factors as the vehicle to support the improvements required to address the needs of 3 target groups:

Table 2: Target groups, training needs and improvement objectives of AIRVET's training materials

Target Audience	Training Need	Objective of improvement
Maintenance Technician	Improvement in the teaching materials and soft skill development.	Improve the training materials of the Human Factors module in the Part 66 approved training manual.
Airport Operation Operatives	Upskilling of workers to address skills/training gaps and improve operation safety.	Provide exposure to Human Factors to address skills gaps. Short introductory course to the topics.
Future Workers	New training material.	Provide introductory training materials for future workers who have had no exposure to the subject or the "Aviation Culture".

The AIRVET Alliance developed four courses with specific targeted modules in Human Factors to meet the needs of the areas identified. We have designed courses and modules in a variety of sizes fit for a variety of purposes in an attempt to provide a wide range of training possibilities that suit several types of participants. For each module there is a document describing in detail the recommended duration, target groups, materials, etc.

- **Human Factors in Aircraft Maintenance:** This module aims to provide students with an understanding of human factors and considers their impact on safety and security in the aviation industry. Students will gain an understanding of the need to take human factors into account in relation to maintenance procedures and practices.
- **An Introduction to Human Factors in Airport Operations:** This module aims to provide an introduction to human factors and their impact on safety and security of airport operations. The module concentrates on the generic human factors impacting on the wide range of tasks encompassed by airport operations, but also includes specific factors pertinent to specific ground operation tasks. A student taking this module would typically be a new employee working within the airport operations environment working for either an airline or an airport operator. This module would typically form part of an induction course for new recruits (next suggested course).
- **Human Factors in Airport Management:** This module has similar objectives to the previous one, but is more comprehensive and extensive. Students will gain an understanding of the need to take into account human factors when managing airport operation task procedures in a robust manner.
- **Aerospace: Human Performance and Limitations:** This short module aims to provide an introduction to human factors and the impact on safety and security issues within an airport. The module concentrates on the generic human factors impacting on the wide range of tasks within an airport. A student taking this module would be a young person, possibly still at school, considering a career within the aviation industry.

CURRICULA DELIVERY – E-LEARNING LESSONS

A total 9 of e-Learning lessons were developed. The content of the e-Learning lessons is closely related with the four training curricula defined: they can be used as “self-standing” training materials and also as support materials to cover specific themes of the four Human Factors curricula defined. The lessons address three topics (learning objects) targeted at different audiences: Students/future workers, maintenance technicians and airport operation workers. The structure of the three learning objectives and name of each lesson are illustrated in the figure below:

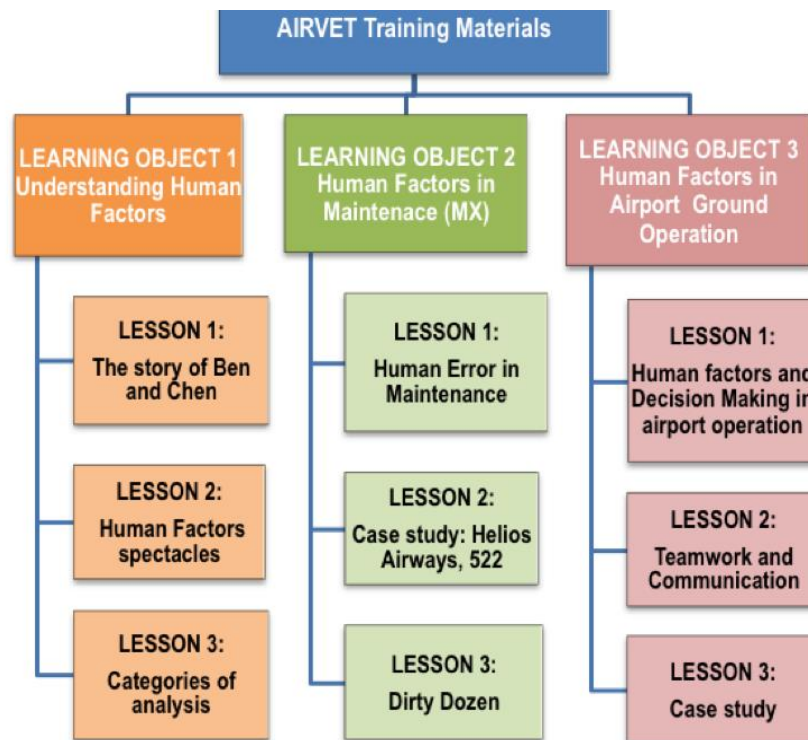


Figure 4: AIRVET Learning objects and lessons

A User's Guide for the AIRVET Lessons is also available with detailed information on how to navigate in the interactive pages and take full-advantage of all the contents developed! The User's Guide, the e-Learning lessons and curricula developed by AIRVET are available free of charge in 6 languages (English, French, Italian, Polish, Portuguese and Spanish) in the website: <http://airvet-project.eu/>.

OTHER OUTCOMES AND RESULTS – NETWORKING AND DISSEMINATION

In a crosscutting perspective of strengthening the AIRVET Alliance, several communication, collaboration and dissemination tools and activities and tools have been developed and implemented.

AIRVET has a dedicated **website** (www.airvet-project.eu) available in 6 languages and associated to accounts in social networks (Facebook and Linked In). The website presents the project focusing on its benefits and aims, makes a concise presentation of the partnership and provides access to results and links to other

resources, as well as all relevant information relating dissemination actions, such as press releases, articles and the newsletters.

Besides all public materials of the project (including the training curricula, e-Learning lessons and Users Guide), the website includes a section “**Stakeholders Database**” with a short explanation about this resource and links to the public access database of AI stakeholders and to the online form to be completed by users who want to suggest a new entry to the database. The database was used both by the AIRVET partners (internal use) to identify and contact relevant stakeholders to participate in the project’s activities; and by visitors, to search for stakeholders related to the AI.

An AIRVET **leaflet** was produced with general information about the project, its objectives and expected results, and the top pick events of the project. A more detailed outline of the project is provided in the AIRVET **Flight Plan**, a public document explaining how the project aims to achieve the intended objectives. Both the leaflet and the Flight Plan have been widely distributed (online and in paper) and will remain available as main synthesis of the AIRVET approach.



Figure 4: AIRVET Flight Plan and AIRVET leaflet

Several other communication materials were developed to promote the project’s objectives and results. This included: posters, roll-ups, presentations and newsletters (3 issues), besides other materials with information about the project. AIRVET partners have also disseminated the project and its outcomes through their own online channels, such as institutional websites, internal newsletters, dedicated social media channels or through external online channels.

AIRVET partners have also organised several **events** and the project was present in external events in various countries.

In the six partner countries, **launch events** were organised to raise awareness about AIRVET. Focus groups, as well as Pilot Sessions were organised in Spain, Italy, France and Poland to feed the needs analysis and later to test and validate the e-Learning lessons and curricula developed. In all partner countries other relevant events were organised: **Open Days** for future AI workers involved hundreds of students in 6 countries, who received information about AIRVET and about the career possibilities in the aeronautics sector; towards the end of the project, **National Workshops** were held to present the final results of the project and obtain input from participants about possible future developments of the AIRVET's materials. Besides having evaluation and assessment purposes, these events also contributed to communicate the achievements and aims of the project.

Another remarkable moment of the project was the **Final Conference** held in Toulouse in September 2015 with invited speakers from Boeing RTD Europe and from Airbus. The conference gathered almost 100 participants with different profiles (students, VET providers, Industry representatives) and besides the presentation of the project's results, it included very interesting presentations about the skills gaps and future requirements for the human resources in the aeronautics sector.

Besides, AIRVET was presented in events and media owed by the project but was also presented in numerous events and media, including conferences, meetings of other projects, newspapers and websites.

The combination of AIRVET's methodology to develop the main materials with the communication tools and activities put in place contributed for a high impact of the project's outcomes and results on the target groups: the methodology of the project included several moments where the input and feedback of end users was required (e.g. questionnaires, focus groups, pilot runs, workshops), which is a powerful tool to engage target groups and raise their interest about the results. On the other hand, the multiplicity of events held and communication tools available created the perfect setting to reach various stakeholders and convince them to use the project's results. According to the feedback of our target groups, the impact of the project was enhanced due to two important features/factors:

- AIRVET produced materials (needs analysis report, training curricula, e-Learning lessons) which address and respond to real needs of the sector
- The materials are easily accessible and available in different languages.

4. Partnerships

The **AIRVET Alliance** is a multidisciplinary consortium composed of 10 partners from 6 countries, representing 3 types of actors of key importance to the AI sector and to the accomplishment of the objectives of the project:

- Bodies with aeronautic expertise
- VET providers
- Bodies involved in the education and training systems

The AIRVET countries (Portugal, France, Italy, Poland, Spain, UK) represent regions where the AI plays an important role and the interest for this industry is increasing. All partners share the common concern towards AI and VET, as well as the relevance of the New Media and ICT technologies in this process.

AIRVET partners represent different institutions such as Aeronautic clusters (namely research centres, airborne and ground industry) Universities, SMEs, VET providers, public bodies and multimedia providers. The relevance of acting at European level is particularly strong in AIRVET, since the aeronautic industry is eminently transnational, with practices such as workers mobility within the EU. In this context, it is particularly relevant to have a training offer, certifying mechanisms and training qualifications that are compatible and offer flexibility for workers (and learners) to move at European level.

As it's clear from the number of initiatives launched at European level to support the aeronautics industry, several challenges cannot be overcome by Member States isolately - they require dialogue, common work and a European cooperation approach in order to tackle them. The future shortage of qualified personnel for aeronautics can only be reversed with a joint European effort to attract, educate/train and motivate young Europeans to embrace future VET training and careers in the field of Aeronautics.

During the implementation of AIRVET, different activities required the collaboration with external stakeholders, for example for the desk research, online survey, interviews, implementation of focus groups and pilot runs. Therefore, the AIRVET Alliance has, from the beginning of activities, established contacts and cooperation with various external actors in different countries. In many cases these contacts were originated from other projects where AIRVET partners collaborate; in other cases new bridges were established, as for example with Eurocontrol and with PEMAS – Portuguese aerospace industry association.

AIRVET counts also with a set of associated partners that have been supporting the project, especially through the participation and input of their experts. Associated partners of AIRVET are, among others, the European HALA! SESAR Research Network, the Spanish Aeronautic Cluster, the United Kingdom Aeronautic Cluster, the French Engineering School on Civil Aviation, Boeing Research & Technology

Europe, Air Europa and the Polish Aviation valley association. AIRVET was also invited to participate in the Skills Hub project, a Leonardo da Vinci partnership aimed at creating a structure and a common language that will facilitate information transfer, mobility and project cooperation between EACP members and regional actors.

Not surprisingly, AIRVET's events contributed to strengthen collaboration with other stakeholders: besides the focus groups and pilot runs held in 4 countries, AIRVET counted with the collaboration of external experts who provided feedback about the curricula developed and organised National Workshops (one in each partner country) and Open Days for Future AI workers (also covering the 6 partner countries and involving at least 300 visitors) to bring together schools, VET institutions, industry and other stakeholders to disseminate jobs in AI, clarify opportunities within the sector and present VET courses as a valuable learning and future career path. The AIRVET final conference (Toulouse, September 2015) was a major event mobilising relevant stakeholders at European level to promote a wide exploitation.

AIRVET benefits from the linkage to other projects with common objectives, such as the Fly Higher project (www.flyhigher.eu), another initiative funded by the European Commission that aims to attract young people into career pathways in the Aeronautic sector through various educational and hands-on events and with IN2SAI (Lifelong Learning Programme) – Increasing Women's Participation in science studies and in aeronautic industry (www.in2sai.eu). More recently, the HiPAir project (ERASMUS+), coordinated by one of AIRVET's partners, also benefited from the work produced and links established during AIRVET. Besides, each partner has privileged links to other relevant organisations or networks.

The wide network accessible to AIRVET includes the AI industry, VET providers and trainers, but also universities, schools, associations, business and youth associations. Interaction with these has also ensured a multiplier effect for dissemination and a stronger basis for future sustainability.

In order to ensure that all these positive collaborations have a consistent follow up, the AIRVET consortium developed the Alliance Sustainability Strategy, to plan the maintenance of cooperation between actors from the AI after the completion of this project. This document presents a set of mechanisms and strategies, which can be easily adopted by any interested party, for supporting the establishment of cooperation relationships between VET providers, sector specific experts and bodies involved in education/training systems.

5. Plans for the Future

The potential of exploitation of the AIRVET's results is enhanced by different factors:

- The materials (especially the needs analysis report, training curricula and e-Learning lessons) address and respond to real needs of the sector. The project had successive testing and validation phases of the curricula and multimedia materials, involving internal and external stakeholders and where the intention of promoting future use of the results was addressed from the beginning.
- The strategy of developing training material around human factors, but implemented in distinct target groups allowed using the strengths of the consortium and provided greatest potential to produce tangible and sustainable benefits.
- Evaluation activities resulted in important documents with the assessment of results of the different phases: Analysing the Territory (needs analysis); Planning the Route (development of curricula); Take-off (multimedia materials). As a “synthesis and conclusions” document, the **New Routes Report** presents recommendations for future work in VET field addressing the AI, based on the AIRVET experience and assessment results.
- The AIRVET multimedia materials are be usable online and offline and are available in six languages: English, Portuguese, Spanish, Italian, French and Polish.

To capitalise on the dissemination efforts and contacts established in AIRVET's activities, a sustainability strategy was developed with a special concern to include the curricula developed/adapted in the national qualification frameworks of the partner countries and to ensure that the AIRVET Alliance continues and expands.

Considering that all partners have a direct interest in the themes of the project and results produced, they will continue the dissemination and exploitation of the project objectives, activities and results via different channels, namely the project Website, newsletters, Facebook, participation in external events, publication of articles and press releases, if possible including presentation of findings, submission of papers, demonstration of the multimedia materials, among others.

There has also been a strong focus in strengthening collaborations with external stakeholders to ensure that:

- The AIRVET's curricula are incorporated in the VET offer for aeronautics in different countries.
- The AIRVET's multimedia materials are used within more formal learning contexts (for example included in the new curricula developed/adapted) but also by self-learners and potential AI workers.

- All other AIRVET useful information and resources are further explored and of use to other initiatives, for example:
 - The information contained on the Territory Analysis provides a valuable mapping of part of the VET offer for aeronautics;
 - The AIRVET database of stakeholders compiles and organises information about different categories of stakeholders in the AI across all Europe.

Additionally, permanent connection with other projects and initiatives will also be key for the continuation of AIRVET's effort. Sharing information and exploring synergies with projects covering common themes and keeping track of potential collaboration opportunities are, therefore, important goals of the AIRVET Alliance. A great effort has been carried out by AIRVET partners in this direction: several meetings were held with organisations interested in using the curricula and e-Learning lessons developed by the project and several commitment letters from various countries were signed to evidence the intention from these institutions to use the AIRVET materials (more details about this can be consulted in the public documents on the AIRVET website related to Sustainability: Alliance Sustainability Plan and Sustainability Plan for VET curricula). Besides, AIRVET partners have already showed the will to continue collaboration in various forms and there are already positive outcomes from these actions: a recently approved ERASMUS+ project is coordinated by an AIRVET partner and involves other AIRVET partners as well as new organisations from the aeronautics sector, which clearly evidences the expansion of the AIRVET Alliance. Other partners are involved in new partnerships and proposals and try to build up on AIRVET's results and experience, which is clearly the spirit of the AIRVET Alliance.

6. Contribution to EU policies

The AIRVET Sectors Skills Alliance addresses the challenges of vocational skills mismatches and shortages in the aeronautic sector. Driven by the real demands of the market, the AIRVET project is an investment in the skills of the Aeronautics Industry workforce. The project intends to have a strong impact on the existing VET training provision in order to boost the skills of human resources working in the AI by the use of multimedia material that will be essential to contribute to the implementation of innovative ways of delivering VET.

AIRVET addresses key EU policies and contributes to the objectives of the Lifelong Learning Programme. By focusing on the improvement of the adequacy and attractiveness of the VET training offer and also on the connection between different VET systems, AIRVET is contributing to the quality of Lifelong Learning and to promote innovation and the European dimension of training for the aeronautics sector. In the first year of AIRVET, we have accomplished important milestones that directly contribute to these aims, such as detecting skills needs and planning the improvement of the VET offer (including curricula and training materials).

AIRVET addresses the shortage of qualified personnel for the European Aeronautic Industry, by contributing to the joint effort to attract, educate/train and motivate young Europeans to embrace future VET training and careers in this field. The project includes concrete activities to *“support participants in training and further training activities in the acquisition and the use of knowledge, skills and qualifications to facilitate personal development, employability and participation in the European labour market”* (one of the specific objectives of the Action). More concretely, the AIRVET curricula and the multimedia resources will contribute to a more efficient VET, based on real market needs, to support a more competitive European workforce for the aeronautics industry.

The AIRVET Alliance, bringing together bodies with AI specific expertise (Polytechnic University of Madrid, Spanish Aeronautic Society, University Paul Sabatier, Coventry University) with VET providers (INOVA+, INNPuls, DeepBLUE and i3M) and bodies involved in education and training systems (Portuguese qualifications agency, Italian university college ARCES) is a clear manifestation of the operational objective *to improve the quality and to increase the volume of co-operation between institutions or organisations providing learning opportunities, enterprises, social partners and other relevant bodies throughout Europe*. Additionally, in their cooperation to improve the quality and adequacy of the VET offer, the AIRVET Alliance is designing, developing and disseminating adapted/new AI curricula and multimedia resources for training, which represents a clear contribution to the objective of facilitating the development of innovative practices in the field of VET.

As mentioned previously, the aeronautics sector operates at European level and several European programmes seek to contribute for a more competitive and

technological advanced European Aeronautics Industry, especially research and innovation programmes. Currently, and while recovering of an unprecedented economic crisis, the EU has to deal with several relevant challenges (such as globalisation, climate change, ageing population, scarcity of resources) which directly and strongly affect the competitiveness, performance and sustainability of the sector.

In order to achieve the desirable sustained growth, aeronautics also depends on the availability of flexible and high-skilled labour force and on the supply of human capital. However, demographic trends (aging of the population and declining of younger age groups) and the competition with other industry sectors for skilled employees put additional pressure on the education and training capacity to meet the high demand, including responsive learning methodologies to new evolving learning.

From this perspective, AIRVET acts complementarity with other policies, not only contributing to a more skilled workforce who can work on the research an innovation initiatives promoted by the EU (for example under Horizon 2020), but also directly addressing the Education and Training 2020 Work Programme, namely by promoting a better anticipation of future skills needs; developing better matching between skills and labour market needs and; bridging the gap between the worlds of education and work."

By raising awareness about the different career opportunities (for men and women) in the aeronautics sector, AIRVET also addresses LLP Horizontal policies aimed at promoting equality between men and women and contributing to combating all forms of discrimination. Many of the AIRVET partners have participated in projects or initiatives targeted at fostering the participation of women in studies and/or careers with male predomination (such as those connected to aerospace), so there is particular attention to messages fostering inclusion and women participation. Also through this component we believe that AIRVET strengthens the contribution of lifelong learning to social cohesion and personal fulfilment.

